

**STATE OF MAINE**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**Stormwater Management Law**

38 M.R.S.A. § 420-D

**PERMIT APPLICATION**





Note:

This is an updated version of previously printed application, #DEPLW052-A1997 printed in September, 1997. The only differences in that printing and this is the addition of a stormwater contractor certification that needs to be completed prior to beginning an approved project. The addition of this certification caused the renumbering of pages for this document, otherwise no other changes have been made.

## **Introduction**

Maine's economy relies on clean lakes, rivers, and coastal waters, and many of Maine's communities use these water resources to supply drinking water. Unfortunately, many of these water resources are impaired or threatened by activities within their watersheds.

These resources are affected by rainwater and snowmelt which flow over disturbed areas, parking lots, gravel and paved roads, lawns, and other areas where people have changed the natural cover and regraded the land. This stormwater picks up soil, residues from gas and oil, nutrients, heavy metals, and bacteria and other pathogens. Without proper treatment, the stormwater will deposit these pollutants in our lakes, streams, and coastal waterbodies. Replacement of woods and fields by impervious areas such as pavement, buildings, and hard-packed gravel roads also increases the volume of stormwater leaving a site. This increase in flow can cause property damage, erode stream banks, scour stream beds, harm habitat, and add to the pollution of lakes, streams, and coastal waters.

In Maine, stormwater pollution has already affected over 200 lakes and several hundred miles of streams; it has also contributed to the closure of many acres of clam flats. In addition to the effects on business from reduced tourism, property damage, and decreasing coldwater fish populations, a decline in water quality affects the value of shorefront property and the cost of treating drinking water, resulting in higher taxes and fees for all residents and businesses. Regions of the state have suffered significant economic losses due to degradation of waterbodies.

Maine's Stormwater Management Law requires some new projects to provide stormwater management as part of their design. The Department of Environmental Protection reviews these stormwater management systems to determine whether they will meet standards in the law for quantity control and pollutant removal, in order to minimize the impacts of stormwater on private and public property.

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## Section 1. Information Concerning the Application Process

**A. Pre-application meeting.** The applicant may request a pre-application meeting. This meeting provides an opportunity for the applicant to meet with a licensing staff member before filling out the application. The pre-application meeting offers an opportunity to ask questions about the licensing process, submissions, and issues likely to arise involving the site. There is no charge to the applicant.

- (1) Scheduling. To schedule a pre-application meeting, send a written request to the office serving the area where the project is located. Exception: a pre-application request for a project located in an area served by the Northern Maine Regional Office should be sent to the Eastern Maine Regional Office in Bangor. To confirm which office serves the area where the project is proposed, call any DEP office.

Central Maine Regional Office 17 State House Station Ray Building Hospital Street Augusta, Maine 04333 <b>207-287-2111</b>	Eastern Maine Regional Office 106 Hogan Road Bangor, Maine 04401 <b>207-941-4570</b>
Northern Maine Regional Office Office 1235 Central Drive Presque Isle, Maine 04769 <b>207-764-0477</b>	Southern Maine Regional Office 312 Canco Road Portland, Maine 04103 <b>207-822-6300</b>

The office in Augusta may also be reached by calling 1-800-452-1942. The caller should ask to speak to the receptionist in the Bureau of Land and Water Quality.

- (2) Submissions. The request for a pre-application meeting should include the following information about the project:

- Phone number where the applicant may be reached during the day.
- Brief description of the project
- Approximate acreage of impervious area and/or disturbed area
- Location of project shown on a United States Geological Survey seven-and-one-half-minute topographic map.
- Plan or preliminary sketch of the project, if available.

**B. Notice.** The applicant is required to provide public notice of the application. A blank copy of the notice form is on page 9 of this publication. A copy of this form or one containing identical information must be used to notify abutters, municipal officials, and local newspapers. The rules concerning notice are contained in "Rules Concerning Processing of Applications", 06-096 CMR 2 (referred to as "Chapter 2").

- (1) Newspaper. Publish the notice once in a newspaper circulated in the area where the project is located. The notice must appear in the newspaper within 30 days prior to filing a new or

amendment application, or a resubmitted application returned as incomplete pursuant to Chapter 2.

- (2) Abutting property owners. Provide a copy of the notice to the owners of abutting property. Their names and addresses can be obtained from town tax maps or local officials. Abutters must receive notice within 30 days prior to filing a new or amendment application, or a resubmitted application returned as incomplete pursuant to Chapter 2.
- (3) Municipal or plantation office. Provide a copy of the public notice together with a duplicate of the entire application to the appropriate town clerk or city clerk. The notice must be received within 30 days prior to filing a new or amendment application, or a resubmitted application returned as incomplete pursuant to Chapter 2.

**C. Assistance and materials.** Department staff are available to answer questions. Direct questions concerning application requirements to the project manager or, if a project manager has not yet been assigned, to the Licensing Coordinator, Division of Land Resource Regulation (287-2111). The applicant should obtain copies of the Stormwater Management Law, and the Stormwater Management Rules (as provisionally adopted) before compiling an application. The following list also includes other materials that may be helpful.

A Developer's Guide to the Maine Stormwater Management Law (Organized Areas). Expected publication in July-August, 1997, DEP.

Maine Erosion and Sediment Control Handbook from Construction: Best Management Practices.

Available from Cumberland County SWCD , 381 Main Street Suite 3, Gorham, Maine 04038 (839-7842). Cost: \$20 (subject to change).

Natural Resources Protection Act (NRPA), 38 M.R.S.A. §§ 489-A, *et. seq.*. Available from any DEP office.

Phosphorus Control in Lake Watersheds: A Technical Guide to Evaluating New Development.

Available from the DEP office in Augusta (287-3901 or 287-2111).

Rules Concerning Processing of Applications, 06-096 CMR 2. Available from the DEP office in Augusta (287-3901 or 287-2111). These rules include requirements for notice, "title, right or interest", public access to information, hearings, and other subjects.

Stormwater Management for Maine: Best Management Practices. Available from the Nonpoint Source Training and Resource Center, at the DEP office in Augusta (287-7726). Cost: \$20 (subject to change).

- Stormwater Management Law, 38 M.R.S.A. § 420-D. Available from the DEP office in Augusta.

- Stormwater Management Rules (*provisionally adopted 2/12/97*), including Chapters 500 and 502. Available from the DEP office in Augusta.

**D. The application.** The application submitted to the department should include completed forms (see pages 5 - 11 for blank forms), and applicable submissions described in Section 2 (stormwater quantity) and Section 3 (stormwater quality) of this publication. The submissions necessary to demonstrate that the standards will be met may vary depending upon the applicable standards, site location, site conditions, and project design (including proposed BMPs): not all submissions listed may be necessary. For example, a project using buffers will usually require fewer submissions

than a project proposing structural control measures. If there are questions concerning submissions, a pre-application meeting may be helpful.

(1) Organization. Organize the application in the following manner.

(a) Place completed copies of the forms, on pages 5 - 11, at the front of the application. Include a list of the names and addresses of the owners of abutting property. Also include information demonstrating that the applicant has sufficient title, right or interest in all of the property proposed for use, such as a copy of the deed, a lease, an easement, an option to buy, or a statement concerning the ability and intent to use eminent domain.

(b) Next, organize the submissions in the order followed in Sections 2 and 3 of this publication. If possible, indicate subsections with tabs.

(2) Combining figures. Plans, drawings and maps may be combined as long as all details are clearly shown. Adhere to the following specifications, unless variations are specifically approved prior to submission of the application:

(a) Sheet size 24" X 36";

(b) Use a scale of 1" = 100';

(c) Maximum vertical exaggeration of 5X; and

(d) Folded to fit 8 1/2" by 11" folders for ease in filing.

(3) Professional assistance. Professional assistance may be necessary to satisfactorily complete the application requirements. Plans, drawings and maps must be prepared by appropriate professionals. All work performed by a professional engineer or other licensed professional must be dated, stamped and signed by the professional. A "certified geologist" or "certified soil scientist", is a professional licensed pursuant to 32 M.R.S.A. §§ 4901 et. seq.. A "registered engineer" is a professional licensed pursuant to 32 M.R.S.A. §§ 1351 et. seq.. A "licensed site evaluator" is a professional licensed under authority established by 22 M.R.S.A. § 42(3-A).

(4) Keep a copy. Retain a copy of the application, as filed with the department, in order to facilitate communications with the department's staff during the review process.

## **E. Submission**

(1) Fees. Attach the appropriate application fee to the application (see fee schedule at back of booklet). All fees must be paid at the time the application is submitted to the department. Checks should be made payable to: Treasurer, State of Maine.

(2) Location. Send the application to the office serving the area where the project is located, except that projects in the area served by the Northern Maine Regional Office should be sent to the Eastern Maine Regional Office (Bangor). Provide a second copy if structural control measures are proposed.

(3) Timing. Submit the application sufficiently in advance of the date of construction to allow time for review. The Stormwater Management Law specifies the review period. See 38 M.R.S.A.

§ 420-D(2). The review period begins when an application is determined to be complete and acceptable for processing. Keep in mind that, as provided in the Stormwater Rules and the department's administrative statutes, certain activities may allow the review time to be extended if additional time is needed.

## **F. Processing**

- (1) Acceptance review. Upon submission and payment of all applicable fees, the application is assigned a project number and given to a project manager. The project manager determines if the application is complete and acceptable for processing. Once this review is complete,
  - (a) The applicant will receive a letter, including the application number and the project manager's name, stating that the application is acceptable for processing; or
  - (b) The application will be returned with a letter stating that the application is not acceptable for processing as filed and identifying deficiencies in the application.
- (2) Application review. The project manager makes a recommendation for final action based upon his or her review of the application, including knowledge gained from any comments received, and any site visit. Additional information may be requested. "Acceptance of an application as complete for review does not constitute a determination by the department on the sufficiency of that information and does not preclude the department from requesting additional information during processing." 38 M.R.S.A. §344 (in part).
- (3) Correspondence and questions. Correspondence and questions concerning the application should be directed to the project manager. The assigned application number should be included in all correspondence.

**G. Final action and appeal.** Depending on the nature of the project, a final decision on the application may be made either by the Commissioner or by the Board of Environmental Protection. A draft copy of the Findings of Fact and Order is made available, upon request, for review by all interested parties at least 5 working days prior to final action by the Commissioner, or 15 working days prior to final action by the Board. Persons aggrieved by a decision may appeal the decision within 30 days following final action.

If an application is approved, a permit is issued and sent to the applicant. The applicant must become familiar with any conditions placed on the approved project. Failure to comply with conditions of approval may lead to action by department enforcement staff, including fines and revocation of the permit.

**H. Feedback.** This is a new application packet. The department welcomes and encourages specific comments that will help to improve it. In addition, please suggest any changes to the process, or supplementary materials or training, that you think would help. Send written comments to: Shari Berry Goodwin, Maine Department of Environmental Protection, State House Station 17, Augusta ME 04333.

**FOR OFFICE USE ONLY**

Assigned code(s) \_\_\_\_\_

L- \_\_\_\_\_

Total Fees: \_\_\_\_\_

Date: Received \_\_\_\_\_

	<b>Most at Risk</b>	<b>Sensitive or Threatened</b>	<b>Other</b>
<b>Impervious</b>	Vegetative = NA Structural = NB	Vegetative = NE Structural = NF	Vegetative = NI Structural = NJ
<b>Disturbed</b>	Vegetative = NC Structural = ND	Vegetative = NG Structural = NH	Vegetative = NK Structural = NL

**PERMIT APPLICATION  
STORMWATER LAW, 38 M.R.S.A. §420-D**

**Please type or print:**

Name of applicant: \_\_\_\_\_

Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

E-mail address (if available): \_\_\_\_\_ Fax number (if available): \_\_\_\_\_

Name of local contact or agent, if applicable: \_\_\_\_\_

Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

E-mail address (if available): \_\_\_\_\_ Fax number (if available): \_\_\_\_\_

Name of project: \_\_\_\_\_

Location of project including road, street, or nearest route number: \_\_\_\_\_

City/Town/Plantation: \_\_\_\_\_, County: \_\_\_\_\_

Name(s) of DEP staff person(s) present at any pre-application meeting: \_\_\_\_\_

Name(s) of DEP staff person(s) otherwise contacted concerning this application: \_\_\_\_\_

Was this project started prior to obtaining a license? Yes \_\_\_\_ No \_\_\_\_.

Is this project or any portion of the site currently subject to an enforcement action? Yes \_\_\_\_ No \_\_\_\_.

Check all that apply--This application is for: Stormwater quantity \_\_\_\_\_; Stormwater quality \_\_\_\_\_

Project requires a Natural Resources Protection Act (NRPA) permit \_\_\_\_\_; Site Law permit (traffic only) \_\_\_\_\_.

Site law application or permit number (s): \_\_\_\_\_

NRPA application or permit number(s): \_\_\_\_\_

## FEE WORKSHEET

Use this form to help determine the permit fee. The fee is based upon the amount of impervious area or disturbed area created.

**Vegetative and structural control measures--note.** Ditches, swales, ditch turn-outs, level spreaders, and similar Best Management Practices (BMPs) used solely to convey or discharge water to a vegetated buffer are not considered, by themselves, to constitute structural BMPs, provided that the applicant assumes that all water quality treatment takes place in the buffer. If any treatment is assumed within the BMPs used to convey water to the buffer, they are treated as structural BMPs for the purposes of determining the applicable fee (and review period).

**Disturbed and impervious area.** "Disturbed area" and "impervious area" are defined in Chapter 500.2(C) and (E).

**When trigger 2 permit thresholds.** If the project requires a permit **both** because of the amount of impervious area and the amount of disturbed area, calculate the fee for each. The higher of the two fees will be the permit fee.

(a) **Impervious area.** Will the project result in 20,000 sq. ft. or more of impervious area in a watershed most at risk, or one acre or more of impervious area elsewhere? Yes \_\_\_\_ No \_\_\_\_

(i) If no, go to (b).

(ii) If yes, use the following to determine the fee.

- How much impervious area will be created? \_\_\_\_\_ sq. ft.; \_\_\_\_\_ acres
- Will the project use \_\_\_\_\_ solely "vegetative" control measures, or \_\_\_\_\_ include "structural" control measures? (check one)

If solely vegetative control measures are used, the fee is \$250 for from 20,000 sq. ft. up to one acre, plus \$125 for each additional whole acre of impervious area.

**Example.** Project will create 2.34 acres of impervious area.

Fee = \$250 + [\$125 x (1)]. Fee = \$375.00

**Your fee:**

\_\_\_\_\_ = \$250 + [\$125 x (\_\_\_\_)].

If any structural control measures are used, the fee is \$500 for from 20,000 sq. ft. up to one acre of impervious area, plus \$250 for each additional whole acre of impervious area.

**Example.** Project will create 2.34 acres of impervious area.

Fee = \$500 + [\$250 x (1)]. Fee = \$750.00.

**Your fee:**

\_\_\_\_\_ = \$500 + [\$250 x (\_\_\_\_)]

(iii) Will the project also result in 5 acres or more of disturbed area? If yes, also fill out (b).

(b) **Disturbed area.** Will the project result in 5 acres or more of disturbed area? Yes \_\_\_\_ No \_\_\_\_

If yes, use the following to determine the fee.

- How much disturbed area will be created? \_\_\_\_\_ acres
- Will the project use \_\_\_\_\_ solely "vegetative" control measures, or \_\_\_\_\_ include "structural" control measures? (check one)

If solely vegetative control measures are used, the fee is \$250 for 5 acres, plus \$250<sup>1</sup> for each additional whole acre of disturbed area.

**Example.** Project will create 6.34 acres of disturbed area.

Fee = \$250 + [\$250 x (1)]. Fee = \$500.00

**Your fee:**

\_\_\_\_\_ = \$250 + [\$250 x (\_\_\_\_)].

On and after 9/19/97:

**Example.** Project will create 6.34 acres of disturbed area.

Fee = \$250 + [\$125 x (1)]. Fee = \$325.00

**Your fee:**

\_\_\_\_\_ = \$250 + [\$125 x (\_\_\_\_)].

If any structural control measures are used, the fee is \$500 for 5 acres, plus \$250 for each additional whole acre of disturbed area.

**Example.** Project will create 6.34 acres of disturbed area.

Fee = \$500 + [\$250 x (1)]. Fee = \$750.00

**Your fee:**

\_\_\_\_\_ = \$500 + [\$250 x (\_\_\_\_)]

### TRACKING INFORMATION

- (a) Is the project located in the direct watershed of a waterbody most at risk?
- (i) If no, go to (b).
- (ii) If yes, will the project use \_\_\_\_\_ solely "vegetative" measures, or \_\_\_\_\_ include "structural" control measures? (Check one)
- (b) Is the project located in a sensitive or threatened region or watershed?
- (i) If no, go to (c).
- (ii) If yes, will the project use \_\_\_\_\_ solely "vegetative" measures, or \_\_\_\_\_ include "structural" control measures? (Check one)
- (c) The project located in some other area within the organized part of the State of Maine.  
Will the project use \_\_\_\_\_ solely "vegetative" measures, or \_\_\_\_\_ include "structural" measures?  
(Check one)

\*\*\*\*

- (d) Does this application include a request for a variance from the peak flow standard, pursuant to Chapter 500.3(A)? If yes, check that which applies:
- \_\_\_\_\_ Discharge to the ocean, a major river segment, or a great pond
- \_\_\_\_\_ Road discharging to buffer
- \_\_\_\_\_ Project other than road discharging to buffer

<sup>1</sup>This figure is reduced from \$250 to \$125 on September 19, 1997. See PL 502, c. 502, § 3.

\_\_\_\_\_ Discharge into a stormwater system of a municipality or public utility.

(e) Does this application include a request for allowance of an insignificant increase in the peak flow from the site or the peak flow of the receiving waters, pursuant to Chapter 500.3, last paragraph?

Yes \_\_\_\_ No \_\_\_\_

(f) Does this application include a request for use of the "lesser standard" provision of the stormwater rules, pursuant to Chapter 500.4? Yes \_\_\_\_ No \_\_\_\_

(g) Does this application propose infiltration of stormwater within the wellhead of a public water supply? Yes \_\_\_\_ No \_\_\_\_

(h) Does this application include a request for a quality "off-set" as described in Chapter 500.5?

Yes \_\_\_\_ No \_\_\_\_

(i) Does this application propose a compensation fee pursuant to PL 1997, c. 502, § 4 (effective 9/19/97)?

## NOTICE OF INTENT TO FILE

Please take notice that \_\_\_\_\_  
(name, address, and phone number of applicant)

is intending to file a Stormwater Management permit application with the Maine Department of Environmental Protection pursuant to the provisions of 38 M.R.S.A. § 420-D on or about \_\_\_\_\_  
(anticipated filing date)

The application is for: \_\_\_\_\_  
(summary of project)

at the following location: \_\_\_\_\_  
(project location)

A request for a public hearing or a request that the Board of Environmental Protection assume jurisdiction over this application must be received by the Department, in writing, no later than 20 days after the application is found by the Department to be complete and is accepted for processing. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at the Department of Environmental Protection's office in

\_\_\_\_\_ during normal working hours. A copy of the application may also  
(Portland, Augusta or Bangor)

be seen at the municipal offices in \_\_\_\_\_, Maine.  
(town)

Written public comments may be sent to the Department of Environmental Protection, Bureau of Land & Water Quality, 17 State House Station, Augusta, Maine 04333.

## APPLICATION CERTIFICATION

The person responsible for preparing this application and/or attaching pertinent site and design information hereto, by signing below, certifies that the application for project approval is complete and accurate to the best of his/her knowledge.

Signature: \_\_\_\_\_

Name (print): \_\_\_\_\_

Date: \_\_\_\_\_

Re/Cert/Lic No.: \_\_\_\_\_

Engineer \_\_\_\_\_

Geologist \_\_\_\_\_

Soil Scientist \_\_\_\_\_

Land Surveyor \_\_\_\_\_

Site Evaluator \_\_\_\_\_

Active Member of the Maine Bar \_\_\_\_\_

Professional Landscape Architect \_\_\_\_\_

Other \_\_\_\_\_

If the signature below is not the applicant's signature, attach a letter of agent authorization signed by the applicant.

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

---

Signature of applicant

Date

## NOTICE CERTIFICATION

By signing below, the applicant (or authorized agent) certifies that he or she has

1. Published a Notice of Intent to File once in a newspaper circulated in the area where the project site is located within thirty days prior to the filing of the application;
2. Sent by certified mail a completed copy of the Notice of Intent to File to the owners of the property abutting the land upon which the project site is located within thirty days prior to the filing of the application;
3. Sent by certified mail a completed copy of the Notice of Intent to File and filed a duplicate of this application with the town clerk or city clerk of the municipality(ies) where the project is located; and
4. Provided a copy of the notice with this application.

---

Signature of applicant or agent\*

Date

---

Print name and title of applicant or agent\*

Date

\*If signature is other than that of the applicant, attach letter of agent authorization signed by applicant.

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Bureau of Land and Water Quality  
17 State House Station  
Augusta, Maine 04333-0017  
Telephone: 287-2111 or 287-3901

**CERTIFICATION – STORMWATER MANAGEMENT LAW**

(To be completed and sent to the DEP after the contractor and any subcontractors have been shown a copy of the approval with conditions by the developer, and the owner and each contractor and subcontractor have certified, on this form provided by the department, that the approval and conditions have been received and read, and the work will be carried out in accordance with the approval and conditions.)

**Name of Applicant:** \_\_\_\_\_

**Town where project located:** \_\_\_\_\_

**Type of project:** \_\_\_\_\_

**Permit number:** \_\_\_\_\_

*Work done by a contractor or subcontractor pursuant to an approval under the Stormwater Management Law may not begin before the contractor and any subcontractors have been shown a copy of the approval with conditions by the developer, and the owner and each contractor and subcontractor have certified, on this form provided by the department, that the approval and conditions have been received and read, and the work will be carried out in accordance with the approval and conditions. Completed certifications forms must be forwarded to the department. See 06-096 CMR 500(9)(A)(7).*

This certification form must be completed and mailed to sent to Shari Berry Goodwin, Department of Environmental Protection, Bureau of Land and Water Quality, 17 State House Station, Augusta, Maine 04333 prior to start of construction. Separate forms may be submitted for each person, or persons may be listed on a single form. List the name, address, phone number, of each person signing the form.

**I certify that I have personally received and read the approval and conditions described below, and that the work will be carried out in accordance with the approval and conditions.**

<b>Owner (Applicant) Name</b> (typed or printed), address, and phone number :	
<b>Signature:</b>	

<b>Contractor Name</b> (typed or printed), address, and phone number:	
<b>Signature:</b>	

<b>Subcontractor Name</b> (typed or printed), address, and phone number:	
<b>Signature:</b>	

## Section 2. Stormwater Quantity Submissions

Each project is required to meet the stormwater quantity standards (Chapter 500.3) in the Stormwater Management Rules. This section describes the submissions required to demonstrate compliance with those standards, and describes submissions needed to apply for a variance from the peak flow standard. Each applicant must complete applicable parts of subsections 2(A) through (F), on pages 11 - 15, below. These submissions cover the narrative, maps, pre-project site plan, post-project site plan, runoff analyses, and drainage system sizing. Depending upon the project design, the applicable parts of subsections 2(G) through (I), on pages 15 - 18, may also be required. These submissions concern detention and retention basins, infiltration systems, and easements.

An applicant for a variance from the peak flow standard (Chapter 500.3(A)) must complete the applicable parts of Section 2(J), on pages 18 - 19. Submissions otherwise required may be significantly reduced if the applicant is eligible for this variance. This is a site-specific determination. The applicant for this variance is strongly encouraged to schedule a pre-application meeting with the department in order to identify applicable submissions.

**A. Narrative.** Provide a narrative describing pre-project and post-project site conditions and the effects of post-project site runoff on peak discharge rates and flooding. Provide the following information in the narrative.

- (1) Project location. The general location and orientation of the project within the watershed(s).
- (2) Surface water on or abutting the site. All lakes, rivers, streams, brooks, and wetlands on or abutting the site.
- (3) Downstream ponds and lakes. All downstream ponds and lakes that may be affected by site runoff.
- (4) Historic flooding. A list of areas, buildings, and facilities that historically flood or may be affected by site runoff. This includes off-site as well as on-site areas, buildings, and facilities.
- (5) Alterations to natural drainage ways. Any proposed changes in alignment and channel geometry.
- (6) Modeling assumptions. A discussion of the assumptions used to determine runoff curve numbers, times of concentration, and travel times for each subwatershed.
- (7) Proposed BMPs. A discussion of the methods, if any, that will be employed on the site to reduce any increases in peak flow rates or prevent flooding.
- (8) Project impacts. An overall assessment of the project's impact on receiving waters, adjacent properties, downstream properties, and downstream flow control structures.

**B. Maps.** Provide the following maps for the project.

- (1) Location map. A United States Geological Survey seven-and-one-half-minute topographic map. Show the site's property boundaries on the map. A clean photocopy of the relevant area is acceptable.

- (2) Soils map. A Soil Conservation Service Medium Intensity Soil Survey Map. Show the site's property boundaries on the map. A clean photocopy of the relevant area is acceptable.

**C. Pre-project site plan.** Provide a site plan of the pre-project site at a scale of 1 inch = 100 feet, with a contour interval of two feet unless otherwise approved in writing by the department, showing the following information.

- (1) Map elements. Scale, legend, north arrow, title block, revisions block, and areas for professional stamps.
- (2) Land cover types and boundaries. Cover types as defined by the stormwater model.
- (3) Soil group boundaries. Boundaries of the hydrologic soil groups on the site.
- (4) Subwatershed boundaries. Drainage boundaries for each subwatershed on the site. For the purposes of stormwater quantity, a subwatershed is an area that has a unique time of concentration to a specific point of interest. Subwatersheds may not always be wholly contained within the site's property boundary.
- (5) Hydrologic flow lines. Flow lines for determining times of concentration and travel times. For each flow line, indicate the flow type (sheet, shallow-concentrated, or channel flow) and the flow length.
- (6) Existing runoff storage areas. Areas (depressions, wetlands, ponds, etc.) currently functioning to detain, retain, or infiltrate runoff.
- (7) Existing roads and drives. Include existing state routes, town roads, private drives, and unimproved roads on or bordering the site.
- (8) Existing facilities. All existing buildings, parking lots, and facilities.
- (9) Existing drainage systems. Existing culverts, catch basins, storm sewers, and outfalls.
- (10) Natural and man-made drainage ways. Any streams, brooks, swales, road ditches, and other open drainage channels.
- (11) Wetlands. All wetlands.
- (12) Flooded Areas. All areas currently flooded due to runoff from the 10-year and 25-year, 24-hour storms.
- (13) Benchmark(s). The location of a permanent elevation benchmark on the site.

**D. Post-project site plan.** Provide a site plan of the post-project site at a scale of 1 inch = 100 feet, with a contour interval of two feet, unless otherwise approved in writing by the department, showing the following information.

- (1) Map elements. Scale, legend, north arrow, title block, revisions block, and areas for professional stamps.
- (2) Land cover types and boundaries. Cover types as defined by the stormwater model.

- (3) Soil group boundaries. Boundaries for the hydrologic soil groups on the site.
- (4) Subwatershed boundaries. Drainage boundaries for each subwatershed. For the purposes of stormwater quantity, a subwatershed is an area that has a unique time of concentration to a specific point of interest. Subwatersheds may not always be wholly contained within the site's property boundary.
- (5) Hydrologic flow lines. Flow lines for determining the times of concentration and travel times. For each flow line, indicate the flow type (sheet, shallow-concentrated, or channel flow) and the flow length.
- (6) Runoff storage areas. Any existing or proposed areas (depressions, wetlands, ponds, etc.) to be used to detain, retain, or infiltrate runoff.
- (7) Roads and drives. All state routes, town roads, private drives, site access drives, and unimproved roads on or bordering the site after the project is completed.
- (8) Facilities. All buildings, parking lots, and other facilities that will be built or remain on the site as part of the project.
- (9) Drainage systems. All culverts, catch basins, storm sewers, and outfalls that will be built or remain on the site as part of the project.
- (10) Natural and man-made drainage ways. Any streams, brooks, swales, road ditches, and other open drainage channels.
- (11) Wetlands. All wetlands.
- (12) Drainage easements. Boundaries of any on-site or off-site drainage easements that will be designated as components of the stormwater management system.
- (13) Stormwater detention, retention, or infiltration facilities (BMPs). For each BMP,
  - (a) Drainage boundary. Drainage boundary for the area draining to the BMP.
  - (b) Drainage area size. Size of the drainage area to the nearest 0.01 acres.
- (14) Flooded areas. Show all areas that will be flooded due to the 10-year and 25-year, 24-hour storms.
- (15) Benchmark(s). Show the location of a permanent elevation benchmark located on the site.

**E. Runoff analyses.** Provide pre-project and post-project stormwater analyses of the site, in accordance with acceptable engineering practice, as provided at Chapter 500.6(A)(3).

At a minimum, site runoff analyses must include the following information.

- (1) Qualifications. A statement of the analyst's qualifications for performing the stormwater analysis.

- (2) Pre-project analysis. Pre-project curve number computations, time-of-concentration calculations, travel time calculations, and peak discharge computations for each subwatershed for the 24-hour storms of the 2-year, 10-year, and 25-year frequencies.
- (3) Post-project analysis. Post-project curve number computations, time-of-concentration calculations, travel time calculations, and peak discharge computations for each subwatershed for the 24-hour storms of the 2-year, 10-year, and 25-year frequencies.
- (4) 100-year flood analysis. A quantitative analysis of runoff impact due to the 100-year, 24-hour storm on downstream structures and receiving waterbodies. This analysis is only necessary if the site runoff is discharged into a designated 100-year flood area.

**F. Drainage system sizing.** Provide calculations for sizing and stabilizing on-site runoff conveyance structures, including catch basins, storm sewers, culverts, vegetated channels, lined channels, roof drains, and level spreaders. Include a detail sheet showing scaled drawings and cross sections of these runoff conveyance structures and associated practices, such as inlet and outlet protection, as appropriate.

**G. Detention and retention basins.** Design detention and retention basins in accordance with good engineering practice, such as those in the following technical guides:

*Engineering Field Manual*, U.S. Department of Agriculture, Soil Conservation Service (1984);

*Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices*, Cumberland County SWCD and Maine DEP (1991); or

*Design and Construction of Urban Stormwater Management Systems*, American Society of Civil Engineers (1992).

The department will accept other appropriate references. The following submissions are required for each detention or retention basin, if applicable.

- (1) Basin sizing calculations. Runoff calculations, stage-storage curves, and storage volume calculations for sizing the basin.
- (2) Inlet calculations. Calculations for sizing and stabilizing the inlet structure to the basin.
- (3) Outlet calculations. Include calculations for sizing and stabilizing the outlet structure from the basin. Design the outlets to control 24-hour storms of 2-year, 10-year, and 25-year frequencies without the emergency spillway being activated. The outlet must discharge to an area receiving concentrated flow in the pre-project conditions or discharge must be converted to sheet flow using a properly sized level spreader.
- (4) Emergency spillway calculations. Calculations for sizing and stabilizing the emergency spillway. Design the spillway to independently convey the basin-routed runoff from a 25-year, 24-hour storm while maintaining one foot of freeboard between the water surface in the basin and the top of the embankment.

- (5) Subsurface investigation report. A brief discussion of the subsurface conditions and the supporting test-pit or boring logs for any areas on which a water impoundment embankment will be built.
- (6) Embankment specifications. Construction and material specifications for any earthen embankments, including core fill specifications, shell fill specifications, compaction specifications, and specifications for foundation preparation.
- (7) Embankment seepage control designs. Designs and supporting calculations for controls used to limit seepage under or through the earthen embankment.
- (8) Outlet seepage control designs. Designs and supporting calculations for controls used to control seepage along pipe outlets through the embankment.
- (9) Detail sheet. A detail sheet showing plan and cross-sectional views of the outlet structure, emergency spillway, inlet protection structure, outlet protection structure, pipe seepage controls, and embankment seepage controls.
- (10) Basin cross-sections. Scaled cross-sections through the embankment showing the grade of the upstream face, the grade of the downstream face, the crest width, the elevation of the embankment's crest, the elevation of the basin's floor, the elevation of the emergency spillway's crest, and the peak storage elevations in the basin due to runoff from the 2-year, 10-year, and 25-year, 24-hour storms.
- (11) Basin plan sheet. A scaled plan view of the pond showing the location of the inlet, outlet, emergency spillway, associated riprap areas, and any other details necessary for constructing the basin.
- (12) Maintenance plan. A maintenance plan describing the anticipated maintenance tasks, the frequency for performing each task, and the sediment disposal plans for each detention or retention basin. Include the name, address, and telephone number of the person responsible for ensuring that timely maintenance is done. Include an example page of the BMP maintenance log that will be kept for the site. If the applicant will have a BMP maintenance contract with a third party, then also submit a copy of the contract. The department encourages the applicant to use the basic maintenance guidelines in the Maine DEP's *Stormwater Management for Maine: Best Management Practices* for writing the maintenance plan.

If a municipality or quasi-municipal district will assume responsibility for maintaining the basin, then submit a letter from the municipality or district stating that it will assume control of the basin, when it will assume control of the basin, and that it will maintain all components of the system in compliance with department standards and permit standards. If a legally-created association will assume responsibility for maintaining the basin, then submit a copy of the association's charter to be approved by the department.

**H. Infiltration systems.** If infiltration systems are proposed, the following additional submissions are required.

- (1) Maps. Submit the following figures.

- (a) Well locations. A figure showing the location of all public water supply wells within 2,500 feet, and all private water supply wells within 300 feet, of the proposed infiltration area. Identify on this figure the wellhead protection areas around each community public water supply well and each non-community, non-transient public water supply well.
- (b) Infiltration area. A section of the most recent Significant Sand and Gravel Aquifer Map showing the location of the proposed infiltration area. Clean photocopies are acceptable.

(2) Design. Submit the following information to verify the suitability of the system design.

- (a) Subsurface investigations. Test pits, borings, or other subsurface investigations to determine the geology and water table elevations in the area of the proposed infiltration structure. Subsurface investigations should extend to a depth at least five feet below the bottom of the area to locate bedrock, restrictive layers, the seasonal high water table, or other features which could affect the infiltration capacity of the structure.
- (b) Soil permeability measurements. Measurements of the permeability of the soils proposed for the infiltration area. If possible, permeability should be measured in the soil materials in situ at the depths representative of the final elevations.
- (c) Details of the structure. A plan view, cross-sections, and suitable details of the structure, including, as applicable, inlet protection, outlet protection, emergency spillway design; specifications for filter fabric, fill, and other materials used in construction; specifications for observation wells, and; other information required for construction. The plan view must also show setbacks from foundations, basements, wastewater disposal fields, drinking water supply wells, and surface water bodies, as applicable. This information may be combined with information required under subsections 2(D), on pages 13 - 14, and 2(G), on pages 15 - 16.
- (d) Wellhead protection zone. If any part of the infiltration system is located within a wellhead protection zone, a specific analysis of the likely pollutants found in runoff from the areas contributing runoff to the infiltration system, and description of the specific measures used to prevent those pollutants from reaching groundwater.

(3) Maintenance and Operations Plan

- (a) Maintenance. In addition to submissions required by paragraph 2(G)(12), on page 16, information detailing the maintenance of the infiltration area, including but not limited to: measures to prevent sediment from reaching the basin during construction and establishment of any vegetative filters or other treatment BMPs installed upflow of the infiltration system; measures to minimize reduction of infiltration capacity through accumulation of sediment and debris; provisions to evaluate the performance of the infiltration area over time; provisions and procedures for renovation of the infiltration area if infiltrative capacity is reduced so as to fail to meet stormwater quantity standards or cause flooding; provisions to remove accumulated sediment and other debris from the infiltration area, if necessary, and; maintenance of any filter strips, sediment traps or other practices which provide sediment removal or other treatment of runoff prior to its discharge to the infiltration area.
- (b) Storage points of potential groundwater contaminants. A plan showing the locations of all storage points of potential groundwater contaminants, including but not limited to: petroleum products, fertilizers and pesticides, material stockpiles, and sand - salt storage areas. This plan may be combined with the site plan required under subsection 2(D), on pages 13 - 14. For those products which will be used on-site, indicate the area(s) of usage and estimate the intended rates if those areas drain to the infiltration area.
- (c) Groundwater elevation monitoring. A figure showing locations of groundwater elevation observation wells and a program for monitoring groundwater elevation to evaluate the

effects of mounding and the performance of the system. These wells may be shown on the site plan required under subsection 2(D), on pages 13 - 14.

- (d) Groundwater quality monitoring (if applicable). For infiltration areas located within wellhead protection areas and on significant sand and gravel aquifers or recharge areas, in addition to the submissions listed in (c), a plan for quarterly monitoring of groundwater quality upgradient and downgradient of the proposed infiltration area.

**I. Easements.** Submit a list of all on-site and off-site easements designated as components of the site's stormwater management system.

**J. Variance procedures.** The department may grant a variance from the peak flow standard for the entire project or specific subwatersheds. In each case, the applicant must submit information demonstrating that the project meets the requirements of the variance.

A development which meets applicable criteria for a stormwater quantity variance may not discharge any quantity of stormwater without adequate treatment to remove contaminants, as required by the stormwater quality standards (Chapter 500.4) or by 38 M.R.S.A. § 413.

(1) Discharge to the ocean, a great pond, or a major river segment. Chapter 500.3(A)(1). Provide the following information:

- (a) Map. A map showing the project location and the ocean, great pond, or river segment to which stormwater will be discharged.
- (b) Drainage plan. A scaled plan showing the path by which stormwater will reach the ocean, great pond, or river segment.
- (c) Drainage system design. Designs and calculations for the pipes or man-made channels showing that they can convey the calculated runoff peaks without eroding or overloading.
- (d) Outfall design. Designs and calculations showing that the stormwater outfall at the resource is properly sized and stabilized for the calculated flow rates and outfall conditions.
- (e) Easements. Evidence that drainage easements have been obtained on any downstream properties across which site runoff must flow to reach the ocean, great pond, or river segment.

(2) Discharge to a buffer. Chapter 500.3(A)(2). Provide the following information.

- (a) Buffer plan. A scaled plan showing all treatment buffers, ditches (if any), ditch turn-outs (if any), level spreaders (if any) and other BMPs discharging stormwater to buffers. For each buffer indicate on the plan the buffer's depth (parallel to the flow path), area, and cover type (wooded or non-wooded), and show all roads, buildings, and other facilities in the subwatershed draining to the buffer. This plan may be combined with the site plan required under subsection 2(D), on pages 13 -14.
- (b) Designs and calculations. Provide a typical design for any ditch turnouts, level spreaders, and other BMPs discharging stormwater to buffers, and the calculations used to determine their spacing.

- (c) Easements. Provide evidence that buffer easements have been obtained on any off-site properties to which flow will be directed.
  - (d) Preservation. For each buffer, evidence, such as deed restrictions or conservation easements to which the department is a party, that the buffer will be preserved in a wooded state, or, for vegetated non-wooded buffers, in a vegetated state.
- (3) Public stormwater system. Chapter 500.3(A)(3). Provide the following information.
- (a) Letter of permission. A letter from the municipality or public utility stating that runoff from the project may be discharged to the public stormwater system.
  - (b) Proof of capacity. Calculations demonstrating that the public stormwater system has the capacity to accommodate the change in flow from the project.

### Section 3. Stormwater Quality Submissions

Certain projects are required to meet stormwater quality standards (Chapter 500.4) in the Stormwater Management Rules, depending upon the size and location of the project. This section describes the submissions required to demonstrate compliance with those standards.\* Each applicant required to meet quality standards must complete the applicable parts of subsections 3(A) and (B) on this page. Subsection 3(C), on page 20, describes the submissions associated with the basic stabilization standard. Subsection 3(D), on pages 20 - 22, concerns the 80% TSS removal standard; subsection 3(E), on page 19, the sliding scale TSS removal standard; and subsection 3(F), on pages 22 - 25, the phosphorus removal standard.

\*See Chapter 500.4(A)(1) to determine if the project is required to meet quality standards and, if so, which quality standard(s) apply.

**A. Narrative.** In addition to the narrative required in subsection 2(A), on page 12, submit the following:

- (1) The general topography on the site. A description of whether the terrain is flat, gently rolling, hilly, or steep.
- (2) Alterations to land cover. A description of how the project will change the existing land cover on the site.
- (3) Stormwater treatment methods to be used on the site. A description of the Best Management Practices (BMPs) that will be used on the site. Give a general justification for using these particular BMPs and indicate the anticipated removal efficiency for each BMP.
- (4) Off-site credits. Location and nature of any off-site total suspended solids (TSS) off-set credits or phosphorus off-set credits.
- (5) Compensation fees. Statutory authority effective September 19, 1997. A description of any use of a compensation fee to off-set all or a portion of the phosphorus removal necessary to meet the site's phosphorus allocation.

**B. Post-project site plan.** Provide the following information on the site plan required under subsection 2(D), on pages 13 - 14, for each stormwater treatment BMP proposed.

- (1) Location. The location of each BMP (including buffers).
- (2) Drainage boundary. The boundary of the contributing drainage area to the BMP.
- (3) Drainage area size. The size of the drainage area to the nearest 0.01 acres.

**C. Basic stabilization.** The basic stabilization measures standard is described at Chapter 500.4(A)(2)(d). If required to meet this standard, submit the following. This information may be combined with information required under subsection 2(F) on page 15.

- (1) Ditches, swales, and other open stormwater channels. Designs and calculations for sizing and stabilizing ditches, swales, and other on-site stormwater conveyance structures.
- (2) Culvert and storm-drain outfalls. Designs and calculations for sizing and stabilizing culverts and outfalls, based on anticipated flows and tail-water conditions.
- (3) Earthen slopes and embankments. Details and specifications for stabilizing steep or long slopes. Address seepage, stability, and erosion control in the design.
- (4) Disturbed areas. Specifications for revegetating, paving, or permanently mulching disturbed areas.
- (5) Gravel roads and drives. Cross-sections showing travel width, and crown, ditching, or water bars, if proposed. Provide specifications for the base, the subbase, and the surface materials. Describe the measures to be used to ensure that stormwater drains immediately off the roads and road shoulders to adjacent buffer areas or stable ditches, and is not impeded by accumulations of graded material on the road shoulder or by excavation of false ditches in the shoulder.
- (6) Maintenance. Provide a maintenance plan describing measures used to prevent or correct erosion and to maintain capacity of channels.

The stabilization measures must use accepted erosion and sedimentation best management practices that achieve long-term erosion and sedimentation control. The department encourages the applicant to use the siting, design, and maintenance guidelines in the *Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices* by Cumberland County SWCD and Maine DEP for meeting the requirements of this standard. Other practices may be approved by the Department on a case-by-case basis.

**D. 80% TSS removal.** The 80% TSS removal standard is described at Chapter 500.4(A)(2)(a). If required to meet this standard, submit the following. This information may be combined with information required under subsections 2(D) - (H), beginning on page 13.

- (1) Design drawings and specifications. Design drawings and specifications for each stormwater quality BMP, excluding vegetated buffers. The drawings should be sufficiently detailed to allow a contractor unfamiliar with stormwater quality BMPs to construct and install the BMP.
- (2) Design calculations. Design calculations for each stormwater quality BMP to be installed on the site. These must include calculations for determining flow rates and volumes to the BMP, sizing the inlet structure, determining storage capacity, determining hydraulic stability within

the structure, sizing outlet controls, and any other calculations necessary to show that the BMP will remove the desired pollutant load and still remain functional in accordance with its maintenance plan.

- (3) Maintenance plan. A maintenance plan for each stormwater quality BMP, including anticipated maintenance tasks, the frequency for performing each task, and the location and methods of sediment disposal. Include the name, address, and telephone number of the person responsible for ensuring that timely maintenance is done. Include an example page of the BMP maintenance log that will be kept for the site. If the applicant will have a BMP maintenance contract with a third party, submit a copy of the contract. The department encourages the applicant to use the basic maintenance guidelines in the Maine DEP's *Stormwater Management for Maine: Best Management Practices* for writing the maintenance plan.
- (4) TSS removal efficiency determinations. The rationale and any supporting calculations for determining the TSS removal efficiency for each stormwater quality BMP. The removal efficiency represents the percent removal of total suspended solids on an annual load basis, given the BMP design, the site's storm hydrology, and the project's land management.
- (5) Treatment calculations for site subwatersheds. Provide calculations showing how the combination of stormwater quality BMPs on the site will achieve the required TSS removal for each site subwatershed. The department encourages the applicant to use the methods and worksheets in Chapter 5 and Appendix F of the Maine DEP's *Stormwater Management for Maine: Best Management Practices* to determine the overall treatment level for each subwatershed.
- (6) TSS credit determination. If proposing to use the TSS offset credit described at Chapter 500.5, provide the following.
  - (a) Location map. A topographic map showing the location of the off-site area(s) where impervious area will be reduced or eliminated.
  - (b) Scaled plan. A plan at a scale of one inch = 200 feet or other scale approved in writing by the Department showing the off-site area(s), impervious area(s) to be revegetated to woods (if any), and impervious area(s) to be revegetated to lawn or other non-forested condition (if any).
  - (c) Title and right. Documents (deed, legal agreement, etc.) which allow the applicant to reduce or eliminate the off-site impervious area. Include deed restrictions that will prevent changes in land use that would increase TSS export from the area without department approval.
  - (d) Demolition plan. A demolition schedule and debris disposal plan for removing the impervious surfaces.
  - (e) Vegetation plan. A plan for revegetating the off-site area. If the applicant will claim a TSS credit by changing impervious area to a non-forested area, this plan must include specifications for applying topsoil, seed, fertilizer, lime, mulch, and mulch anchoring. If the applicant will claim a TSS credit by changing impervious area to woods, this plan must also include specifications for tree planting.

- (f) Offset credit calculation. Use one of the following equations, as applicable.<sup>2</sup>

*2:1 Credit Rate:*

*Offset Credit = 1 - [(0.5 x off-site impervious acres x (1 - offset BMP TSS removal efficiency)) , New impervious area]*

*1:1 Credit Rate:*

*Offset Credit = 1 - [(off-site impervious acres x (1 - offset BMP TSS removal efficiency)) , New impervious area]*

If using the 1:1 credit rate, provide evidence that the off-set area is likely to export at least as much TSS on an areal basis as the proposed site.

- (g) New treatment level calculation. Determine the new %TSS removal for each subwatershed using the following equation.

$$\text{New \%TSS removal level} = (\text{Offset credit} \times 40\%) + 40\%$$

The new %TSS removal level is the level of treatment that on-site BMPs must achieve in the subwatershed. This new %TSS removal level, however, may not be less than 40%.

**E. Sliding scale TSS removal.** The sliding scale TSS removal standard is described at Chapter 500.4(A)(2)(b). If required to meet this standard, submit the following. This information may be combined with information required under subsections 2(D) - (H), beginning on page 13.

- (1) Design drawings and specifications; design calculations; buffer strip submissions; maintenance plan; TSS removal efficiency determinations; treatment calculations for site subwatersheds; TSS credit determination. Information as required under subsections 3(D)(1) - (5), on pages 20 - 21; and under 3(D)(6), on page 21, if applicable, except that the new treatment level at paragraph 3(D)(6)(g) is revised to:

$$\text{New \%TSS removal level} = [\text{offset credit} \times (\text{required treatment} - 40\%)] + 40\%$$

- (2) Impervious area calculation. Calculations used to determine the percent impervious area for each subwatershed on the site.
- (3) TSS removal determination. Percent TSS removal needed for each subwatershed on the site, as determined from the graph in Chapter 500.4(A)(2)(b) or the table in Chapter 500, Appendix A.

**F. Phosphorus removal.** The phosphorous standard is described at Chapter 500.4(A)(2)(c). If required to meet this standard, submit the following information. This information may be combined with information required under subsections 2(D) - (H), beginning on page 13.

The department encourages the applicant to use the methods presented in the department manual *Phosphorus Control in Lake Watersheds: A Technical Guide to Evaluating New Development*

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<sup>2</sup> The offset credit formula at Chapter 500.5(A)(1) contains a typographical error resulting in a negative function; it is suggested that the formula in this application be used to calculate offset credit.

for designing and implementing a phosphorus control plan. Other methods not yet accepted will be reviewed individually.

- (1) Calculations. Calculations used to determine the site's allowable phosphorus export and post-project phosphorus export. Default per-acre phosphorus allocations used in determining allowable phosphorus export for most at risk watersheds are available from the department's Division of Watershed Management (287-3901). The applicant may propose an alternative allocation for the watershed.

Statutory authority allowing use of a compensation fee takes effect September 19, 1997. If a compensation fee is proposed, determine the amount of phosphorus export to be accounted for through compensation by subtracting the allowable phosphorus export from the post-project phosphorus export. Calculate the appropriate fee at a rate of \$10,000 per pound phosphorus. Reference: PL 1997, c. 502, § 4 (to be codified at 38 M.R.S.A. § 420-D(11)).<sup>3</sup>

- (2) Soil survey. Confirmation by a certified soil scientists of the hydrologic soil group and , for hydrologic soil group C soils, the depth to limiting factor for on-site areas that will be used for buffers or infiltration areas. At a minimum, a class D (medium intensity) soil survey that has been verified by a certified soil scientist is necessary for any cleared areas that will become lawn.
- (3) Buffer strip submissions. For each vegetated buffer used for phosphorus control, submit the following.
  - (a) Cutting option. The cutting option that will be used for the on-site buffer. Chapter 5 of *Phosphorus Control in Lake Watersheds: A Technical Guide to Evaluating New Development* suggests cutting options available for phosphorus control buffers.
  - (b) Deed restrictions. Text for deed restrictions that is appropriate for the cutting option selected.
- (4) Wetpond submissions. Provide the following information for each wetpond.
  - (a) Statement of wetland impact. A clear statement of whether any portion of the wetpond will be located in a wetland. Specify the size of the wetland and the soil group(s) within the wetland. Indicate whether the applicant has had any contact with the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, or Maine Department of Environmental Protection about a permit for the wetland alteration. State whether any intermittent or perennial stream flows through the wetland.
  - (b) Plan view of the pond. A plan view of the wetpond at a scale of 1"= 20'. Show the wetpond inlet location, the outlet location, the location of the emergency spillway, the locations of any flow baffles, the location of the safety bench, and the calculated surface area of the wetpond at the permanent pool elevation.
  - (c) Profile view of the pond. A profile view of the wetpond through the downstream embankment at a vertical scale no greater than 1" = 5' and a horizontal scale no greater

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<sup>3</sup>If payment of a compensation fee is approved, an order approving the project will be conditioned upon payment of the fee.

than 1" = 10'. Show the interior side slope grade(s), the exterior side slope grade(s), the embankment crest width, a cross-section of the wetpond outlet, the permanent pool elevation, the flood elevation in the pond due to a 25-year, 24-hour storm event, the original soil grade, any proposed cuts and fills, outlet seepage controls, embankment seepage controls, and the crest elevation of the emergency spillway.

- (d) Calculations for phosphorus control. Storage volume and mean depth calculations for the pond. One foot of ice cover must be subtracted from the permanent pool elevation when calculating the mean depth and volume.
  - (e) Stabilization plan. A stabilization plan for the wetponds. This may be included as part of the basic stabilization plan in subsection 3(C), on page 20. The wetpond must be stabilized before runoff is diverted into it from the site. If the pond will be built on marine or lacustrine sediments, submit specifications for stabilizing these soils to prevent the suspension of silt and clay during storm events.
  - (f) Construction date(s). A construction schedule for the wetpond, including dates for site clearing, embankment construction, outlet installation, emergency spillway construction, and seeding.
  - (g) Inlet and outlet details. Design drawings and specifications for the wetpond's inlet, outlet, and emergency spillway. These designs should be sufficiently detailed to allow a contractor unfamiliar with wetpond construction to build them. The department encourages the applicant to use the design guidelines in the Cumberland County SWCD's and Maine DEP's *Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices* and the Maine DEP's *Stormwater Management for Maine: Best Management Practices* for meeting the requirements of this standard.
  - (h) Maintenance provisions. Information as required under subsection 3(D)(3), on page 21.
- (5) Submissions for other phosphorous removal BMPs. If proposing to use BMPs other than buffers, infiltration systems, and wetponds to remove phosphorus from site runoff, submit the following information regarding each BMP. The department encourages the applicant to use the guidance in the Maine DEP's *Stormwater Management for Maine: Best Management Practices* for designing and siting BMPs.
- (a) Design drawings and specifications; design calculations; and maintenance plan. Information as required under subsections 3(D)(1) - (3) on pages 20 - 21.
  - (b) Phosphorus removal efficiency determinations. Rationale and any supporting calculations for determining the phosphorus removal efficiency for each stormwater quality BMP. The removal efficiency represents the percent removal of phosphorus on an annual load basis, given the BMP design, the site's storm hydrology, and the project's land management. When calculating phosphorus export, a removal efficiency must be converted to a treatment factor. "Treatment factor" = 1 - "removal efficiency".
- (6) Phosphorus credit determination. If proposing to use the phosphorus off-set credit described at Chapter 500.5, provide the following.
- (a) Location map; scaled plan, title and right; demolition plan; and vegetation plan. Information as required under paragraphs 3(D)(6)(a) - (e), on page 21.

- (b) Offset credit calculation. Use one of the following equations, as applicable.

*2:1 Credit Rate*

*Phosphorus Off-set Credit = 0.5 x (export from existing impervious off-site area  
- export from eliminated or reduced off-site area)*

*1:1 Credit Rate*

*Phosphorus Off-set Credit = 1.0 x (export from existing impervious off-site area  
- export from eliminated or reduced off-site area)*

If using the 1:1 credit rate, provide evidence that the off-set area is likely to export at least as much phosphorus on an areal basis as the proposed site.

- (c) Calculation for new allowable export. Use the following equation.

*New Allowable Phosphorus Export = Old Allowable Phosphorus Export +  
Phosphorus Off-set Credit*

The new allowable phosphorus export is the maximum amount of available phosphorus that can be exported from the on-site project.